

Carbon Tax Act 15 of 2019¹

[ASSENTED TO 22 MAY 2019]	[DATE OF COMMENCEMENT: 1 JUNE 2019]
	(see s. 21 of this Act)

(English text signed by the President)

published in

GG 42483 of 23 May 2019

as amended

by	with effect from	refer to
Taxation Laws Amendment Act 34 of 2019	1 June 2019; 15 January 2020	ss. 91 (2), 92 (2), 93 (2), 94 (2), 95 (2), 96 (2), 97 (2) & 100 of Act 34 of 2019
Rates and Monetary Amounts and Amendment of Revenue Laws Act 22 of 2020	1 January 2020	s. 10 (2) of Act 22 of 2020
Taxation Laws Amendment Act 23 of 2020	1 January 2020	s. 77 (2) of Act 23 of 2020
Rates and Monetary Amounts and Amendment of Revenue Laws Act 19 of 2021	1 January 2021	s. 6 (2) of Act 19 of 2021
Taxation Laws Amendment Act 20 of 2021	1 January 2021	ss. 63 (2), 64 (2) & 65 (2) of Act 20 of 2021
Rates and Monetary Amounts and Amendment of Revenue Laws Act 19 of 2022	1 January 2022	ss. 7 (2) & 8 (2) of Act 19 of 2022
Taxation Laws Amendment Act 20 of 2022	1 January 2022; 1 January 2023	ss. 38 (2), 39 (2) & 39 (3) of Act 20 of 2022
Taxation Laws Amendment Act 17 of 2023	1 June 2019; 1 January 2023	ss. 66 (2) & 67 (2) of Act 17 of 2023
Rates and Monetary Amounts and Amendment of Revenue Laws Act 19 of 2023	1 January 2023	ss. 8 (2) & 9 (2) of Act 19 of 2023

ACT

To provide for the imposition of a tax on the carbon dioxide (CO₂) equivalent of greenhouse gas emissions; and to provide for matters connected therewith.

Preamble

SINCE the causality of the increasing of anthropogenic greenhouse gas emissions in the atmosphere and the global climate change has been scientifically confirmed;

AND SINCE it has consequently become necessary to manage the inevitable climate change impact through interventions that build and sustain South Africa's social, economic and environmental resilience and emergency response capacity;

AND SINCE it has also become necessary to make a contribution to the global effort to stabilise greenhouse gas concentrations in the atmosphere at a level that avoids dangerous anthropogenic interference with the climate system within a timeframe that enables economic, social and environmental development to proceed in a sustainable manner;

AND SINCE the costs of remedying pollution, environmental degradation and consequent adverse health effects and of preventing, controlling or minimising further pollution, environmental damage or adverse health effects must be paid for by those responsible for harming the environment (the polluter pays principle);

AND SINCE government is desirous to utilise a package of measures in an effort to address the challenges posed by climate change;

AND SINCE this package of measures will be achieved by the deployment of a range of measures to support the system of desired emissions reduction outcomes, including the appropriate pricing of carbon and economic incentives, as well as the use of emissions offsets;

AND SINCE government is of the view that imposing a tax on greenhouse gas emissions and concomitant measures such as providing tax incentives for rewarding the efficient use of energy will provide appropriate price signals to help nudge the economy towards a more sustainable growth path;

BE IT THEREFORE ENACTED by the Parliament of the Republic of South Africa, as follows:-

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Part I
Definitions and general provisions relating to imposition of carbon tax (ss 1-6)

1 Definitions

In this Act, unless the context otherwise indicates-

'allowance' means any amount allowed to be taken into account in terms of Part II, subject to section 14, for the purposes of determining the amount of carbon tax payable;

'carbon budget' means an amount of greenhouse gas emissions permitted, against which direct emissions arising from the operations of a person during a defined time period will be accounted for;

'carbon dioxide (CO₂) equivalent' means the concentration of carbon dioxide that would cause the same amount of radiative forcing (the difference of sunlight absorbed by the Earth and energy radiated back to space) as a given mixture of carbon dioxide and other greenhouse gases;

'carbon tax' means a tax on the carbon dioxide (CO₂) equivalent of greenhouse gas emissions imposed in terms of section 2;

'combustion' means the exothermic reaction of a fuel with oxygen;

'Commissioner' means the Commissioner for the South African Revenue Service;

'emission factor' means the average emission rate of a given greenhouse gas for a given source, relative to the activity data of a source stream assuming complete oxidation for combustion and complete conversion for all other chemical reactions;

'emissions' means-

(a) the release of greenhouse gases or their precursors; or

(b) the release of greenhouse gases and their precursors, into the atmosphere, over a specified area and period of time;

'emissions intensity' means an indicator of the result of the measurement of the quantity of greenhouse gas emissions in relation to an activity;

'emissions intensity benchmark' means the result of the measurement in respect of an activity that creates greenhouse gas emissions-

- (a) expressed as a predetermined value of the quantity of specified greenhouse gas emissions;
- (b) in relation to an activity that is differentiated from other activities by means of a product, a type of fuel or a technology; and
- (c) compared against the quantity of greenhouse gas emissions, in relation to an identical activity undertaken by another person;

'fugitive emissions' means emissions that are released into the atmosphere by any other means than through an intentional release through stack or vent including extraction, processing, delivery and burning for energy production of fossil fuels, including leaks from industrial plant and pipelines;

'greenhouse gas' means gaseous constituents of the atmosphere, both natural and anthropogenic, that absorb and re-emit infrared radiation, and includes carbon dioxide (CO₂), methane (CH₄), nitrous oxide (N₂O), hydrofluorocarbons (HFCs), perfluorocarbons (PFCs) and sulphur hexafluoride (SF₆);

'industrial process' means a manufacturing process that chemically or physically transforms materials;

'IPCC' means the Intergovernmental Panel on Climate Change established for the purposes of providing internationally co-ordinated scientific assessments of the magnitude, timing and potential environmental and socio-economic impact of climate change by the United Nations Environment Programme (UNEP) and the World Meteorological Organization (WMO) and endorsed by the United Nations by General Assembly Resolution 43/53 made at the 70th plenary meeting on 6 December 1988;

'IPCC code' means the source code in respect of an activity resulting in the emission of a greenhouse gas as stipulated in the 'Guidelines for National Greenhouse Gas Inventories' (2006) issued by the IPCC;

'Minister' means the Minister of Finance;

'person' includes-

- (a) a partnership;
- (b) a trust;
- (c) a municipal entity as defined in [section 1](#) of the Local Government: Municipal Systems Act, 2000 ([Act 32 of 2000](#));
- (d) a public entity listed in Schedules 2, 3A, 3B, 3C and 3D to the Public Finance Management Act, 1999 ([Act 1 of 1999](#)); and
- (e) a municipality which falls within a category listed in section 155(1) of the Constitution of the Republic of South Africa, 1996, and which is an organ of state within the local sphere of government exercising legislative and executive authority within an area determined in terms of the Local Government: Municipal Demarcation Act, 1998 ([Act 27 of 1998](#));

[Para. (e) added by [s. 89 \(1\)](#) of [Act 34 of 2019](#) (wef 1 June 2019).]

'taxpayer' means a person liable for the carbon tax in terms of section 3; and

'tax period' means a period in respect of which tax is payable as prescribed under section 16.

2 Imposition of carbon tax

There must be levied and collected for the benefit of the National Revenue Fund, a tax to be known as the carbon tax.

3 Persons subject to tax

A person is-

- (a) a taxpayer for the purposes of this Act; and
- (b) liable to pay an amount of carbon tax calculated as contemplated in section 6 in respect of a tax period as specified in section 16,

if that person conducts an activity in the Republic, resulting in greenhouse gas emissions, equal to or above the threshold determined by matching the activity listed in the column 'Activity/Sector' in Schedule 2 with the number in the corresponding line of the column 'Threshold' of that table.

[S. 3 amended by [s. 90 \(1\)](#) of [Act 34 of 2019](#) (wef 1 June 2019).]

4 Tax base

(1) Notwithstanding subsection (2), the carbon tax must be levied in respect of the sum of the greenhouse gas emissions of a taxpayer in respect of a tax period expressed as the carbon dioxide equivalent of those greenhouse gas emissions resulting from fuel combustion and industrial processes, and fugitive emissions in accordance with an emissions determination methodology approved by the Department of Environmental Affairs.

[Sub-s. (1) substituted by s. 91 (1) (a) of [Act 34 of 2019](#) (wef 1 June 2019).]

(2) Where a taxpayer uses an emissions determination methodology in respect of the sum of the greenhouse gas emissions of a taxpayer in respect of a tax period-

- (a) employing readily available statistical data on the intensity of processes (activity data) and emission factors as specified in the 'IPCC Guidelines For National Greenhouse Gas Inventories' (2006); or
- (b) employing the statistical data and emission factors as specified in paragraph (a) including country-specific emission factors,

in respect of greenhouse gas emissions resulting from fuel combustion, and industrial processes, and fugitive emissions the carbon tax must be levied in respect of the sum of the greenhouse gas emissions of a taxpayer in respect of a tax period expressed as the carbon dioxide equivalent of those greenhouse gas emissions resulting from-

- (a) fuel combustion in respect of that tax period that is a number constituted by the sum of the respective numbers determined for each type of fuel in respect of which a greenhouse gas is emitted in respect of that tax period which respective numbers must be determined in accordance with the formula:

$$E = (A \times B)$$

in which formula-

- (i) 'E' represents the number to be determined;
- (ii) 'A' represents the mass of any one type of fuel expressed in tonne that is the source of the greenhouse gas emission, other than any fuel utilised for the purposes of international aviation and

maritime transport;

(iii) 'B' represents the greenhouse gas emission factor in carbon dioxide equivalent per tonne that must be determined in accordance with the formula:

$$X = \{[(C \times 1) + (M \times 23) + (N \times 296)] \times D\} / Y$$

[Formula substituted by s. 91 (1) (c) of [Act 34 of 2019](#) (wef 1 June 2019).]

in which formula-

(aa) 'X' represents the number to be determined;

(bb) 'C' represents the carbon dioxide emissions of a fuel type determined by matching the fuel type listed in the column 'fuel type' in Table 1 of Schedule 1 with the number in the corresponding line of the column 'CO2 (KGCO2/TJ)' of that table;

(cc) 'M' represents the methane emissions of a fuel type determined by matching the fuel type listed in the column 'fuel type' in Table 1 of Schedule 1 with the number in the corresponding line of the column 'CH4 (KGCH4/TJ)' of that table;

(dd) 'N' represents the Nitrous Oxide emissions of a fuel type determined by matching the fuel type listed in the column 'fuel type' in Table 1 of Schedule 1 with the number in the corresponding line of the column 'N2O (KGN2O/TJ)' of that table;

(ee) 'D' represents the net default calorific value (terajoule per tonne) of a fuel type determined by matching the fuel type listed in the column 'fuel type' in Table 1 of Schedule 1 with the number in the corresponding line of the column 'DEFAULT CALORIFIC NET VALUE (TJ/TONNE)' of that table; and
[Item (ee) substituted by s. 91 (1) (e) of [Act 34 of 2019](#) (wef 1 June 2019).]

(ff) 'Y' represents the number 1000;
[Item (ff) added by s. 91 (1) (d) of [Act 34 of 2019](#) (wef 1 June 2019).]

(b) fugitive emissions that is a number constituted by the sum of the respective numbers determined for each type of commodity, fuel or technology in respect of which the greenhouse gas is emitted in respect of a tax period which respective numbers must be determined in accordance with the formula:

$$F = (N \times Q)$$

in which formula-

(i) 'F' represents the number to be determined;

(ii) 'N' represents the mass expressed in tonne in the case of solid fuels or the volume of each type of fuel expressed in cubic metres in the case of fuels other than solid fuels, in respect of the greenhouse gas emission; and

(iii) 'Q' represents the greenhouse gas emission factor in carbon dioxide equivalent per tonne or cubic metres-

(aa) in the case of oil and natural gas, that must be determined in accordance with the formula:

$$X = [(C \times 1) + (M \times 23) + (N \times 296)] \times Y$$

in which formula-

(a) 'X' represents the number to be determined;

(b) 'C' represents the carbon dioxide emissions of a fuel type determined by matching the fuel type listed in the column 'fuel type' in Table 2 of Schedule 1 with the number in the corresponding line of the column 'CO2' of that table;

(c) 'M' represents the methane emissions of a fuel type determined by matching the fuel type listed in the column 'fuel type' in Table 2 of Schedule 1 with the number in the corresponding line of the column 'CH4' of that table;

(d) 'N' represents the Nitrous Oxide emissions of a fuel type determined by matching the fuel type listed in the column 'fuel type' in Table 2 of Schedule 1 with the number in the corresponding line of the column 'N2O' of that table;

(e) 'Y' represents the number 1000; and

(bb) in the case of coal mining and handling, that must be determined in accordance with the formula:

$$X = (M \times D \times 23) \times Y$$

in which formula-

(a) 'X' represents the number to be determined;

(b) 'M' represents the methane emissions of a fuel type determined by matching the fuel type listed in the column 'fuel type' in Table 2 of Schedule 1 with the number in the corresponding line of the column 'CH4' of that table;

(c) 'D' represents the density factor for coal mining and handling methane emissions (0.67 x 10-6 Gg/ m3);

(d) 'Y' represents the number 1000; and
[Item (iii) substituted by s. 91 (1) (f) of [Act 34 of 2019](#) (wef 1 June 2019).]

(c) industrial process in respect of a tax period that is a number constituted by the sum of the respective numbers determined for each type of commodity, fuel or technology in respect of which the greenhouse gas is emitted in respect of that tax period which respective numbers must be determined in accordance with the formula:

$$P = (G \times H)$$

in which formula-

(i) 'P' represents the amount to be determined that must not be less than zero;

(ii) 'G' represents the mass of each raw material used or product produced expressed in tonne in respect of which the greenhouse gas is emitted in respect of that tax period; and

(iii) 'H' represents the greenhouse gas emission factor in carbon dioxide emissions equivalent per tonne for each raw material used or product produced that must be determined in accordance with the formula:

$$X = (C \times 1) + (M \times 23) + (N \times 296) + (H \times 11\,900) + (T \times 5\,700) + (S \times 22\,200)$$

in which formula-

(aa) 'X' represents the number to be determined;

(bb) 'C' represents the carbon dioxide emissions of a raw material or product determined by matching the fuel type listed in the column 'SOURCE CATEGORY ACTIVITY / RAW MATERIAL / PRODUCT' in Table 3

of Schedule 1 with the number in the corresponding line of the column '**tonneCO2/tonne product**' of that table;

[Item (bb) substituted by s. 91 (1) (g) of [Act 34 of 2019](#) (wef 1 June 2019).]

(cc) '**M**' represents the methane emissions of a raw material or product determined by matching the fuel type listed in the column 'SOURCE CATEGORY ACTIVITY / RAW MATERIAL / PRODUCT' in Table 3 of Schedule 1 with the number in the corresponding line of the column '**tonneCH4/tonne product**' of that table;

[Item (cc) substituted by s. 91 (1) (g) of [Act 34 of 2019](#) (wef 1 June 2019).]

(dd) '**N**' represents the Nitrous Oxide emissions of a raw material or product determined by matching the fuel type listed in the column 'SOURCE CATEGORY ACTIVITY / RAW MATERIAL / PRODUCT' in Table 3 of Schedule 1 with the number in the corresponding line of the column '**tonneN2O/tonne product**' of that table;

[Item (dd) substituted by s. 91 (1) (g) of [Act 34 of 2019](#) (wef 1 June 2019).]

(ee) '**H**' represents the Hexafluoroethane (C2F6) emissions of a raw material or product determined by matching the fuel type listed in the column 'SOURCE CATEGORY ACTIVITY / RAW MATERIAL / PRODUCT' in Table 3 of Schedule 1 with the number in the corresponding line of the column '**tonneC2F6/tonne product**' of that table;

[Item (ee) substituted by s. 91 (1) (g) of [Act 34 of 2019](#) (wef 1 June 2019).]

(ff) '**T**' represents the carbon tetrafluoride (CF4) emissions of a raw material or product determined by matching the fuel type listed in the column 'SOURCE CATEGORY ACTIVITY / RAW MATERIAL / PRODUCT' in Table 3 of Schedule 1 with the number in the corresponding line of the column '**tonneCF4/tonne product**' of that table; and

[Item (ff) substituted by s. 91 (1) (g) of [Act 34 of 2019](#) (wef 1 June 2019).]

(gg) '**S**' represents the Sulphur hexafluoride (SF6) emissions of a raw material or product determined by matching the fuel type listed in the column 'SOURCE CATEGORY ACTIVITY / RAW MATERIAL / PRODUCT' in Table 3 of Schedule 1 with the number in the corresponding line of the column '**tonneSF6/tonne product**' of that table;

[Item (gg) substituted by s. 91 (1) (g) of [Act 34 of 2019](#) (wef 1 June 2019).]

[Sub-s. (2) amended by s. 91 (1) (b) of [Act 34 of 2019](#) (wef 1 June 2019).]

5 Rate of tax

(1) The rate of the carbon tax on greenhouse gas emissions must, subject to subsections (2) and (3), be imposed at an amount of R159 per ton carbon dioxide equivalent of the greenhouse gas emissions of a taxpayer.

[Sub-s. (1) substituted by [s. 10 \(1\) of Act 22 of 2020](#) (wef 1 January 2020), by [s. 6 \(1\) of Act 19 of 2021](#) (wef 1 January 2021), by [s. 7 \(1\) of Act 19 of 2022](#) (wef 1 January 2022) and by [s. 8 \(1\) of Act 19 of 2023](#) (wef 1 January 2023).]

(2) The rate of tax specified in subsection (1) must be increased to the amount of-

(a) R159 for tax periods from 1 January 2023 until 31 December 2023;
(b) R190 for tax periods from 1 January 2024 until 31 December 2024; and
(c) R236 for tax periods from 1 January 2025 until 31 December 2025.

[Sub-s. (2) substituted by [s. 92 \(1\) of Act 34 of 2019](#) (wef 1 June 2019) and by s. 38 (1) (a) of [Act 20 of 2022](#) (wef 1 January 2023).]

(2A) The rate of tax specified in subsection (1) must be increased to the amount of R308 for tax periods from 1 January 2026 until 31 December 2026.

[Sub-s. (2A) inserted by s. 38 (1) (b) of [Act 20 of 2022](#) (wef 1 January 2023).]

(2B) The rate of tax specified in subsection (1) must be increased to the amount of-

(a) R347 for tax periods from 1 January 2027 until 31 December 2027;
(b) R385 for tax periods from 1 January 2028 until 31 December 2028; and
(c) R424 for tax periods from 1 January 2029 until 31 December 2029.

[Sub-s. (2B) inserted by s. 38 (1) (b) of [Act 20 of 2022](#) (wef 1 January 2023).]

(2C) The rate of tax specified in subsection (1) must be increased to the amount of R462 for tax periods from 1 January 2030 until 31 December 2030.

[Sub-s. (2C) inserted by s. 38 (1) (b) of [Act 20 of 2022](#) (wef 1 January 2023).]

(3) The rate of tax must be increased after 31 December 2030 by the amount announced by the Minister in the national annual budget contemplated in [section 27 \(1\)](#) of the Public Finance Management Act, 1999 ([Act 1 of 1999](#)).

[Sub-s. (3) substituted by [s. 92 \(1\) of Act 34 of 2019](#) (wef 1 June 2019) and by s. 38 (1) (c) of [Act 20 of 2022](#) (wef 1 January 2023).]

(4) The rate of tax specified in subsection (1) may be adjusted by the amount announced by the Minister in the national annual budget contemplated in [section 27 \(1\)](#) of the Public Finance Management Act, 1999, ([Act 1 of 1999](#)), in 2025 and thereafter at three-year intervals to take into account the impact of exchange rate movements on the comparability of the rate to global carbon pricing.

[Sub-s. (4) added by s. 38 (1) (d) of [Act 20 of 2022](#) (wef 1 January 2023).]

6 Calculation of amount of tax payable

(1) Subject to subsections (2) and (3), the amount of tax payable by a taxpayer in respect of a tax period must be calculated in accordance with the formula:

$$X = \{[(E - S) \times (1 - C)] - [D \times (1 - M)]\} + \{P \times (1 - J)\} + \{F \times (1 - K)\} \times R$$

in which formula-

(a) '**X**' represents the amount to be determined that must not be less than zero;
(b) '**E**' represents the number in respect of the total fuel combustion related greenhouse gas emissions of the taxpayer in respect of that tax period expressed as a carbon dioxide equivalent determined in terms of section 4 (1) or (2) (a);
(c) '**S**' represents the number in respect of greenhouse gas emissions, expressed in terms of carbon dioxide equivalent that were sequestered in respect of that tax period as verified and certified by the Department of Environmental Affairs;
(d) '**C**' represents a number equal to the sum of the percentages of allowances determined under sections 7, 10, 11, 12, and 13 in respect of that tax period, subject to section 14;
(e) '**D**' represents the number in respect of the petrol and diesel related greenhouse gas emissions of that taxpayer in

respect of that tax period expressed as a carbon dioxide equivalent, determined in terms of section 4 (1) or (2) (a);

(f) '**M**' represents a number equal to the sum of the percentages of the allowances determined under sections 7, 12 and 13 in respect of that tax period, subject to section 14;

(g) '**P**' represents the number in respect of the total industrial process related greenhouse gas emissions of the taxpayer in respect of that tax period expressed as a carbon dioxide equivalent determined in terms of section 4 (1) or (2) (c);

(h) '**J**' represents a number equal to the sum of the percentages of the allowances determined under sections 7, 8, 10, 11, 12 and 13 in respect of that tax period, subject to section 14;

[Para. (h) substituted by [s. 93 \(1\) of Act 34 of 2019](#) (wef 1 June 2019).]

(i) '**F**' represents the number in respect of the total fugitive greenhouse gas emissions of the taxpayer in respect of that tax period expressed as a carbon dioxide equivalent determined in terms of section 4 (1) or (2) (b);

(j) '**K**' represents the sum of the percentages of the allowances determined in terms of sections 7, 9, 10, 11, 12 and 13 in respect of that tax period, subject to section 14; and

(k) '**R**' represents the rate of tax prescribed under section 5: Provided that where the number in respect of the determination of the expression '**(E-S)**' in the formula is less than zero, that number must be deemed to be zero.

[Sub-s. (1) amended by s. 77 (1) (a) of [Act 23 of 2020](#) (wef 1 January 2020).]

(2) The amount of tax payable by a taxpayer in respect of the generation of electricity from fossil fuels conducting activities under the IPCC codes 1A1 for energy industries (including heat and electricity recovery from Waste), 1A2 for manufacturing industries and construction (including heat and electricity recovery from Waste) and 1A4 for other sectors (including heat and electricity recovery from Waste) in respect of a tax period must be calculated in accordance with the formula:

$$X = A - B - C$$

in which formula-

(a) '**X**' represents the amount to be determined that must not be less than zero;

(b) '**A**' represents the amount of tax payable in respect of a tax period determined in terms of subsection (1);

(c) '**B**' represents an amount equal to the quantity of renewable electricity (kWh) purchased under a power purchase agreement multiplied by the renewable energy premium determined by the Minister by notice in the *Gazette* in respect of a tax period, until 31 December 2025; and

[Para. (c) substituted by s. 63 (1) (a) of [Act 20 of 2021](#) (wef 1 January 2021) and by s. 39 (1) (b) of [Act 20 of 2022](#) (wef 1 January 2023).]

(d) '**C**' represents an amount equal to the environmental levy contemplated in respect of electricity generated in the Republic in section B of Part 3 of Schedule 1 to the Customs and Excise Act, 1964 ([Act 91 of 1964](#)), paid in respect of a tax year, until 31 December 2025.

[Para. (d) substituted by s. 39 (1) (c) of [Act 20 of 2022](#) (wef 1 January 2023).]

[Sub-s. (2) amended by s. 39 (1) (a) of [Act 20 of 2022](#) (wef 1 January 2023).]

(3) The amount of tax payable by a taxpayer that is a petroleum refinery in respect of a tax period must be calculated in accordance with the formula:

$$X = A - (B \times P)$$

in which formula-

(a) '**X**' represents the amount to be determined that must not be less than zero;

(b) '**A**' represents the amount of tax payable in respect of a tax period determined in terms of subsection (1);

(c) '**B**' represents an amount of 0.66 cents per litre; and

[Para. (c) substituted by [s. 8 \(1\) of Act 19 of 2022](#) (wef 1 January 2022) and by [s. 9 \(1\) of Act 19 of 2023](#) (wef 1 January 2023).]

(d) '**P**' represents the total amount of petrol produced expressed in litres.

[Sub-s. (3) added by s. 77 (1) (b) of [Act 23 of 2020](#) (wef 1 January 2020).]

(4) For the purposes of this section, '**sequestrate**' means-

(a) the process of storing a greenhouse gas in forestry plantations and harvested wood products within the operational control of the taxpayer in respect of fuel combustion emissions declared in terms of IPCC codes 1A2d for pulp, paper and print and 1A2j for wood and wood products in terms of section 4 (1); or

(b) the process of storing a greenhouse gas in forestry plantations and harvested wood products within the operational control of the taxpayer in respect of fuel combustion emissions declared in terms of IPCC codes 1A2d for pulp, paper and print and 1A2j for wood and wood products or increasing the carbon content of a carbon reservoir other than the atmosphere in respect of fuel combustion emissions declared in terms of section 4 (2) (a).

[Sub-s. (4) renumbered by s. 77 (1) (b) of [Act 23 of 2020](#) (wef 1 January 2020) and substituted by s. 63 (1) (b) of [Act 20 of 2021](#) (wef 1 January 2021) and by s. 39 (1) (d) of [Act 20 of 2022](#) (wef 1 January 2022).]

Part II Allowances (ss 7-13)

7 Basic tax-free allowance

(1) A taxpayer that conducts an activity that is listed in Schedule 2 in the column 'Activity/ Sector' must receive an allowance in respect of those emissions, determined in terms of subsection (2).

(2) The percentage of the allowance referred to in subsection (1) must be calculated by matching the line in which the activity is contained in the column 'Activity/Sector' with the corresponding line in the column 'Basic tax-free allowance %' in Schedule 2 of the total percentage of greenhouse gas emissions in respect of a tax period in respect of that activity.

[S. 7 substituted by [s. 94 \(1\) of Act 34 of 2019](#) (wef 1 June 2019).]

8 Allowance for industrial process emissions

(1) A taxpayer that conducts an activity in respect of industrial process emissions that is listed in Schedule 2 in the column 'Activity/Sector' must receive an allowance in respect of those emissions, determined in terms of subsection (2).

(2) The percentage of the allowance referred to in subsection (1) must be 10 per cent of the total greenhouse gas emissions in respect of a tax period in respect of that activity.

[Sub-s. (2) substituted by [s. 95 \(1\) of Act 34 of 2019](#) (wef 1 June 2019).]

9 Allowance in respect of fugitive emissions

A taxpayer that conducts an activity that is listed in Schedule 2 in the column 'Activity/Sector' must receive an allowance in respect of fugitive emissions greenhouse gas emissions in respect of the tax period in respect of that activity.
[S. 9 substituted by [s. 96 \(1\) of Act 34 of 2019](#) (wef 1 June 2019).]

10 Trade exposure allowance

A taxpayer that is liable for the carbon tax in respect of greenhouse gas emissions must receive an allowance up to a maximum of ten per cent in respect of trade exposure as measured by value of exports plus imports divided by the total production by sector or subsector that must be determined in a manner prescribed by the Minister by regulation.

11 Performance allowance

(1) A taxpayer that has implemented measures to reduce the greenhouse gas emissions of that taxpayer in respect of a tax period must receive an allowance in respect of that tax period not exceeding five per cent of the total greenhouse gas emissions of that taxpayer during that tax period, determined in accordance with the formula:

$$Z = (A / B - C) \times D$$

in which formula-

- (a) 'Z' represents the percentage to be determined that must not be less than zero;
- (b) 'A' represents
 - (i) the sector or sub-sector greenhouse gas emissions intensity benchmark as prescribed by the Minister; or
 - (ii) where no value is prescribed as required by subparagraph (i), the number zero;
- (c) 'B' represents the measured and verified greenhouse gas emissions intensity of a taxpayer in respect of a tax period;
- (d) 'C' represents the number one; and
- (e) 'D' represents the number 100.

(2) For the purposes of this section 'measures' include action taken to reduce greenhouse gas emissions in respect of a tax period.

12 Carbon budget allowance

(1) Subject to subsection (2), a taxpayer that conducts an activity that is listed in Schedule 2 in the column 'Activity/Sector' and participates in the carbon budget system from 1 January 2021 to 31 December 2024, must receive an additional allowance of five per cent of the total greenhouse gas emissions in respect of a tax period.

[Sub-s. (1) substituted by [s. 64 \(1\) of Act 20 of 2021](#) (wef 1 January 2021) and by [s. 66 \(1\) of Act 17 of 2023](#) (wef 1 January 2023).]

(2) A taxpayer must only receive the allowance as contemplated in subsection (1) if the Department of Environmental Affairs confirms in writing that that taxpayer is participating in the carbon budget system as referred to in subsection (1).

13 Offset allowance

(1) Subject to subsection (2), a taxpayer may reduce the amount in respect of the carbon tax for which the taxpayer is liable in respect of a tax period by utilising carbon offsets as prescribed by the Minister.

[Sub-s. (1) substituted by [s. 97 \(1\) of Act 34 of 2019](#) (wef 1 June 2019).]

(2) The reduction of the liability for the carbon tax allowed in terms of subsection (1) must not exceed so much of the percentage of the total greenhouse gas emissions of a taxpayer in respect of a tax period as is determined by matching the line in the column 'Activity/Sector' with the percentage in the corresponding line of the column 'Offsets allowance %' in Schedule 2.

Part III Limitation of allowances (s 14)

14 Limitation of sum of allowances

A taxpayer, other than a taxpayer in respect of which the maximum total allowance stipulated Schedule 2 constitutes 100 per cent, must only receive the sum of the allowances contemplated in Part II in respect of a tax period to the extent that the sum of those allowances does not exceed 95 per cent of the total greenhouse gas emissions of that taxpayer in respect of that tax period as determined in terms of the column 'Maximum total allowances %' in Schedule 2.

Part IV Administration, tax period and payment of tax (ss 15-17)

15 Administration

(1) The Commissioner must administer the provisions of this Act as if the carbon tax were an environmental levy as contemplated in [section 54A](#) of the Customs and Excise Act, 1964 ([Act 91 of 1964](#)), that must be collected and paid in terms of the provisions of that Act.

(2) For the purposes of subsection (1), administrative actions, requirements and procedures for purposes of submission and verification of accounts, collection and payment of the carbon tax as an environmental levy or the performance of any duty, power or obligation or the exercise of any right in terms of this Act are, to the extent not regulated in this Act, regulated by the Customs and Excise Act, 1964.

16 Tax period

- (1) A taxpayer must pay the carbon tax for every tax period.
- (2) A tax period in relation to a taxpayer is
 - (a) commencing on 1 June 2019 and ending on 31 December 2019; and
 - (b) subsequent to the period contemplated in paragraph (a), the period commencing on 1 January of each year and ending on 31 December of that year.

17 Payment of tax

A taxpayer must submit yearly environmental levy accounts and payments as prescribed by rule in terms of the Customs

and Excise Act, 1964 ([Act 91 of 1964](#)), for every tax period.

Part V
Miscellaneous (ss 18-21)

18 Reporting

Despite Chapter 6 of the Tax Administration Act, the Commissioner must annually submit to the Minister a report, in the form and manner that the Minister may prescribe, within six months from the date of submission of environmental levy accounts and payments contemplated in section 17 advising the Minister in respect of that tax period of-

- (a) the total amount of greenhouse gas emissions reported in respect of which taxpayers are liable for the carbon tax; and
- (b) the amount of carbon tax collected.

19 Regulations

The Minister must make regulations in respect of-

- (a) the sector or sub-sector greenhouse gas emissions intensity benchmark for the purposes of symbol 'A' in section 11 (1);
- (b) the manner of determining the amount of the trade exposure allowance contemplated in section 10; and
- (c) carbon offsets contemplated in section 13 regarding-
 - (i) the projects or activities in respect of which an offset is generated;
 - (ii) the limitation on the carbon offset allowance;
 - (iii) offset duration periods;
 - (iv) the institution, board or body that must administer the offset allowance;
 - (v) the powers and responsibilities of the institution, board or body contemplated in subparagraph (iv);
 - (vi) [sic] the procedure that must be followed in claiming the offset allowance;
 - (vii) [sic] the records that must be kept in respect of administering the offset allowance; and
 - (viii) [sic] any other matter necessary for the regulation of the utilisation of the carbon offsets.

20 Amendment of laws

The Customs and Excise Act, 1964 ([Act 91 of 1964](#)), is hereby amended to the extent set out in Schedule 3.

21 Short title and commencement

This Act is called the Carbon Tax Act, 2019, and comes into operation on 1 June 2019.

Schedule 1

[Schedule 1 amended by [s. 98 of Act 34 of 2019](#) (wef 15 January 2020) and by [s. 67 \(1\) of Act 17 of 2023](#) (wef 1 June 2019).]

Table 1
Fuel Combustion Emission Factors

[Table 1 substituted by [s. 98 of Act 34 of 2019](#) (wef 15 January 2020).]

STATIONARY SOURCE CATEGORY

FUEL TYPE	CO ₂ (KGCO ₂ /TJ)	CH ₄ (KGCH ₄ /TJ)	N ₂ O (KGN ₂ O/TJ)	DEFAULT NET CALORIFIC VALUE (TJ/TONNE)		
				NET CALORIFIC VALUE	LOWER LIMIT OF THE 95% CONFIDENCE INTERVAL	UPPER LIMIT OF THE 95% CONFIDENCE INTERVAL
ANTHRACITE	98 300	1	1.5	0.0267	0.0216	0.0322
AVIATION GASOLINE	70 000	3	0.6	0.0443	0.0425	0.0448
BIODIESEL	0	3	0.6	0.027	0.0136	0.054
BIOGASOLINE	0	3	0.6	0.027	0.0136	0.054
BITUMEN	80 700	3	0.6	0.0402	0.0335	0.0412
BLAST FURNACE GAS	260 000	1	0.1	0.00247	0.0012	0.005
DIESEL	74 100	3	0.6	0.043	0.0414	0.0433
BROWN COAL BRIQUETTES	97 500	1	1.5	0.0207	0.0151	0.032
CHARCOAL	0	200	4	0.0295	0.0149	0.058
COAL TAR	80 700	1	1.5	0.028	0.0141	0.055
COKE OVEN COKE AND LIGNITE COKE	107 000	1	1.5	0.0282	0.0251	0.0302

COKE OVEN GAS	44 400	1	0.1	0.0387	0.0196	0.077
COKING COAL	94 600	1	1.5	0.0282	0.024	0.031
CRUDE OIL	73 300	3	0.6	0.0438	0.0401	0.0448
DIESEL	74 100	3	0.6	0.0381	0	0
ETHANE	61 600	1	0.1	0.0464	0.0449	0.0488
GAS COKE	107 000	1	0.1	0.0173	0.0251	0.0302
GAS WORKS GAS	44 400	1	0.1	0.0387	0.0196	0.077
INDUSTRIAL WASTES	143 000	30	4	N/A	N/A	N/A
JET GASOLINE	70 000	3	0.6	0.0443	0.0425	0.0448
JET KEROSENE	71 500	3	0.6	0.0441	0.042	0.045
LANDFILL GAS	0	1	0.1	0.0504	0.0254	0.1
LIGNITE	101 000	1	1.5	0.0119	0.0055	0.0216
LIQUEFIED PETROLEUM GASES	63 100	1	0.1	0.0473	0.0448	0.0522
LUBRICANTS	73 300	3	0.6	0.0402	0.0335	0.0423
MUNICIPAL WASTES (BIOMASS FRACTION)	0	30	4	0.0116	0.0068	0.018
MUNICIPAL WASTES (NON BIOMASS FRACTION)	91 700	30	4	0.01	0.007	0.018
NAPHTHA	73 700	3	0.6	0.0445	0.0418	0.0465
NATURAL GAS	56 100	1	0.1	0.048	0.0465	0.0504
NATURAL GAS LIQUIDS	64 200	3	0.6	0.041	0.0409	0.0469
OIL SHALE AND TAR SANDS	107 000	1	1.5	0.0089	0.0071	0.0111
ORIMULSION	77 000	3	0.6	0.0275	0.0275	0.0283
OTHER BIOGAS	0	1	0.1	0.0504	0.0254	0.1
OTHER BITUMINOUS COAL	94 600	1	1.5	0.0243	0.0199	0.0305
OTHER KEROSENE	71 900	3	0.6	0.037	0	0
OTHER LIQUID BIOFUELS	0	3	0.6	0.0274	0.0138	0.054
OTHER PETROLEUM PRODUCTS	73 300	3	0.6	0.0402	0.0337	0.0482
OTHER PRIMARY SOLID BIOMASS	0	30	4	0.0116	0.0059	0.023

FUEL TYPE	CO2 (KGCO2/TJ)	CH4 (KGCH4/TJ)	N2O (KGN2O/TJ)	DEFAULT NET CALORIFIC VALUE (TJ/TONNE)		
OXYGEN STEEL FURNACE GAS	182 000	1	0.1	0.00706	0.0038	0.0 15
PARAFFIN	71 900	3	0.6	0.0438	0.0424	0.0452
PARAFFIN WAXES	73 300	3	0.6	0.0402	0.0337	0.0482
PATENT FUEL	97 500	1	1.5	0.0207	0.0151	0.032
PEAT	0	1	1.5	0.00976	0.0078	0.0125
PETROL	69 300	3	0.6	0.0443	0.0425	0.0448

PETROLEUM COKE	97 500	3	0.6	0.0325	0.0297	0.0419
REFINERY FEEDSTOCK	73 300	3	0.6	0.043	0.0363	0.0464
REFINERY GAS	57 600	1	0.1	0.0495	0.0475	0.0506
RESIDUAL FUEL OIL (HEAVY FUEL OIL)	77 400	3	0.6	0.0404	0.0398	0.0417
SHALE OIL	73 300	3	0.6	0.0381	0.0321	0.0452
SLUDGE GAS	0	1	0.1	0.0504	0.0254	0.1
SUB-BITUMINOUS COAL	96 100	1	1.5	0.0192	0.0115	0.026
SULPHITE LYES (BLACK LIQUOR)	0	3	2	0.0118	0.0059	0.023
WASTE OILS	73 300	30	4	0.0402	0.0203	0.08
WHITE SPIRIT AND SBP	73 300	3	0.6	0.0402	0.0337	0.0482
WOOD/WOOD WASTE	0	30	4	0.0156	0.0079	0.031

NON-STATIONARY/MOBILE SOURCE CATEGORY ACTIVITY

FUEL TYPE	CO2 (KGCO2/TJ)	CH4 (KGCH4/TJ)	N2O (KGN2O/TJ)	DEFAULT NET CALORIFIC VALUE (TJ/TONNE)		
				NET CALORIFIC VALUE	LOWER LIMIT OF THE 95% CONFIDENCE INTERVAL	UPPER LIMIT OF THE 95% CONFIDENCE INTERVAL
AVIATION GASOLINE	70 000	3	0.6	0.0443	0.0425	0.0448
COMPRESSED NATURAL GAS	56 100	92	3	N/A	N/A	N/A
DIESEL	74 100	4.15	28.6	0.0381	0	0
DIESEL — (OCEAN-GOING SHIPS)	74 100	7	2	0.0381	0	0
DIESEL — RAIL	74 100	4.5	28.6	0.0381	0	0
JET KEROSENE	71 500	0.5	2	0.0441	0.042	0.045
KEROSENE	71 500	3	0.6	0.037	0	0
LIQUEFIED NATURAL GASES	56 100	92	3	N/A	N/A	N/A
LIQUEFIED PETROLEUM GASES	63 100	62	0.2	0.0473	0.0448	0.0522
LUBRICANTS	73 300	3	0.6	0.0402	0.0335	0.0423
NATURAL GAS	56 100	92	3	0.048	0.0465	0.0504
(PARAFFIN) OTHER KEROSENE	71 900	3	0.6	0.0438	0.0424	0.0452
OTHER PETROLEUM PRODUCTS	73 300	3	0.6	0.0402	0.0337	0.0482
PARAFFIN WAXES	73 300	3	0.6	0.0402	0.0337	0.0482
PETROL	69 300	3.5	5.7	0.0443	0.0425	0.0448
REFINERY GAS	57 600	1	0.1	0.0495	0.0475	0.0506
RESIDUAL FUEL OIL — (HEAVY FUEL OIL)	77 400	7	2	0.0404	0.0398	0.0417
SUB-BITUMINOUS COAL	96 100	2	1.5	0.0192	0.0115	0.026

WHITE SPIRIT AND SBP	73 300	3	0.6	0.0402	0.0337	0.0482
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Table 2
Fugitive Emission Factors

[Table 2 substituted by [s. 67 \(1\) of Act 17 of 2023](#) (wef 1 June 2019).]

IPCC Code	SOURCE CATEGORY ACTIVITY	CO2	CH4	N2O
1B1	SOLID FUELS (M3/TONNE)			
1B1a	COAL MINING AND HANDLING			
1B1ai	UNDERGROUND COAL MINING	0.000077	0.00077	
	UNDERGROUND POST-MINING (HANDLING & TRANSPORT)	0.000018	0.00018	
1B1aii	SURFACE COAL MINING	N/A	0	
	SURFACE POST-MINING (STORAGE AND TRANSPORT)	N/A	0	
1B1c2	Charcoal production (Fuel wood input) (kgCH4/TJ)	N/A	0.300	
	Charcoal production (Charcoal produced) (kgCH4/TJ)	N/A	1.000	
1B2	OIL AND NATURAL GAS (Gg/103 M3 TOTAL OIL PRODUCTION)			
1B2b	NATURAL GAS			
1B2b	FLARING AND VENTING			
1.B.2.b.ii	WELL DRILLING	0.0000001	0.000000033	ND
1.B.2.b.ii	WELL TESTING	0.000009	0.000000051	0.00000000068
1.B.2.b.ii	WELL SERVICING	0.000000019	0.00000011	ND
1B2b	GAS PRODUCTION (Gg/106 M3 TOTAL OIL PRODUCTION)			
1.B.2.b.iii.2	FUGITIVES	1.40E-05 to 8.20E-05	3.80E-04 to 2.30E-03	N/A

IPCC Code	SOURCE CATEGORY ACTIVITY	CO2	CH4	N2O
1.B.2.b.ii	FLARING	0.0012	0.00000076	0.000000021
	GAS PROCESSING (Gg/106 M3 RAW GAS FEED)			
1.B.2.b.iii.3	SWEET GAS PLANTS—FUGITIVES	1.50E-04 to 3.20E-04	4.80E-04 to 1.03E-03	N/A
1.B.2.b.ii	SWEET GAS PLANTS - FLARING	0.0018	0.0000012	0.000000025
1.B.2.b.iii.3	SOUR GAS PLANTS - FUGITIVES	0.0000079	0.000097	N/A
1.B.2.b.ii	SOUR GAS PLANTS - FLARING	0.0036	0.0000024	0.000000054
1.B.2.b.i	SOUR GAS PLANTS - RAW CO2 VENTING	0.063	N/A	N/A
1.B.2.b.iii.3	DEEP CUT EXTRACTION - FUGITIVES	0.0000016	0.000011	N/A

1.B.2.b.ii	DEEP CUT EXTRACTION - FLARING	0.00011	0.000000072	0.000000012
1.B.2.b.iii.3	DEFAULT - FUGITIVES	1.20E-05 to 3.20E-04	1.50E-04 to 1.03E-03	N/A
1.B.2.b.ii	DEFAULT - FLARING	0.003	0.000002	0.000000033
1.B.2.b.i	DEFAULT - RAW CO ₂ VENTING	0.04	N/A	N/A
1B2b	GAS TRANSMISSION & STORAGE (Gg-CO₂/year/km)			
1.B.2.b.iii.4	TRANSMISSION - FUGITIVES	0.000000016	0.0000025	N/A
1.B.2.b.i	TRANSMISSION - VENTING	0.0000000085	0.0000010	N/A
1.B.2.b.iii.4	STORAGE (Gg-CO ₂ /year/M3)		2.32E-12	ND
1B2b	GAS DISTRIBUTION (Gg/106M3 OF UTILITY SALES)			
1.B.2.b.iii.5	ALL	0.000051	0.0011	ND
1B2b	NATURAL GAS LIQUIDSTRANSPORT (Gg/103 M3 CONDENSATE ANDPENTANES PLUS)			
1.B.2.a.iii.3	CONDENSATE	0.000000072	0.00000011	
1.B.2.a.iii.3	LIQUEFIED PETROLEUM GAS (Gg/103 M3 LPG)	0.00000043	N/A	2.2 0E-12
1.B.2.a.iii.3	LIQUEFIED NATURAL GAS (Gg/106 M3 MARKETABLE GAS)	ND	ND	ND
1B2a	OIL			
1B2a	OIL PRODUCTION (Gg/103 M3 CONVENTIONAL OIL PRODUCTION)			
1.B.2.a.iii.2	CONVENTIONAL OIL - FUGITIVES (ONSHORE)	1.10E-10 to 2.60E-07	1.50E-09 to 3.60E-06	N/A
1.B.2.a.iii.2	CONVENTIONAL OIL - FUGITIVES (OFFSHORE)	0.00000000043	0.00000000059	N/A
1.B.2.a.i	CONVENTIONAL OIL - VENTING	0.000000095	0.00000072	N/A
1.B.2.a.ii	CONVENTIONAL OIL - FLARING	0.000041	0.000000025	0.00000000064
1B2a	OIL PRODUCTION (Gg/103 M3 HEAVY OIL PRODUCTION)			
1.B.2.a.iii.2	HEAVY OIL/COLD BITUMEN - FUGITIVES	0.00000054	0.0000079	N/A

IPCC Code	SOURCE CATEGORY ACTIVITY	CO ₂	CH ₄	N ₂ O
1.B.2.a.i	HEAVY OIL/COLD BITUMEN - VENTING	0.0000053	0.000017	N/A
1.B.2.a.ii	HEAVY OIL/COLD BITUMEN - FLARING	0.000022	0.00000014	0.0000000046
1B2a	OIL PRODUCTION (Gg/103M3 THERMAL BITUMEN PRODUCTION)			
1.B.2.a.iii.2	THERMAL OIL PRODUCTION - FUGITIVES	0.000000029	0.00000018	N/A
1.B.2.a.i	THERMAL OIL PRODUCTION - VENTING	0.000000022	0.00000035	N/A
1.B.2.a.ii	THERMAL OIL PRODUCTION - FLARING	0.000027	0.000000016	0.0000000024
1B2a	OIL PRODUCTION (Gg/103 M3 SYNTHETIC CRUDE PRODUCTION FROM OILSANDS)			
1.B.2.a.iii.2	SYNTHETIC CRUDE (FROM OILSANDS)	ND	0.0000023	ND

1.B.2.a.iii.2	SYNTHETIC CRUDE (OIL SHALE)	ND	ND	ND
1B2a	<i>OIL PRODUCTION</i> (Gg/103 M3 TOTAL OIL PRODUCTION)			
1.B.2.a.iii.2	DEFAULT TOTAL - FUGITIVES	0.00000028	0.0000022	N/A
1.B.2.a.i	DEFAULT TOTAL - VENTING	0.0000018	0.0000087	N/A
1.B.2.a.ii	DEFAULT TOTAL - FLARING	0.000034	0.000000021	0.0000000054
1B2a	<i>OIL UPGRADING</i> (Gg/103 M3 OIL UPGRADED)			
1.B.2.a.iii.2	ALL	ND	ND	ND
1B2a	<i>OIL TRANSPORT</i> (Gg/103M3 OIL TRANSPORTED BY PIPELINE)			
1.B.2.a.iii.3	PIPELINES	0.0000000049	0.0000000054	N/A
1B2a	<i>OIL TRANSPORT</i> (Gg/103M3 OIL TRANSPORTED BY TANKER TRUCK)			
1.B.2.a.i	TANKER TRUCKS AND RAIL CARS - VENTING	0.0000000023	0.000000025	N/A
	<i>OIL TRANSPORT</i> (Gg/103 M3 OIL TRANSPORTED BY TANKER SHIPS)			
1.B.2.a.i	LOADING OFF-SHORE PRODUCTION ON TANKER SHIPS - VENTING	ND	ND	ND
1B2a	<i>OIL REFINING</i> (Gg/103 M3 OIL REFINED)			
1.B.2.a.iii.4	ALL		2.60E-09 to 4.10E-08	ND

Table 3
INDUSTRIAL PROCESSES AND PRODUCT USE (IPPU) Emission Factors

IPCC Code	SOURCE CATEGORY ACTIVITY/RAW MATERIAL/PRODUCT	TONNE CO2/tonne product	TONNE CH4/tonne product	TONNE N2O/tonne product	TONNE C2F6/tonne product	TONNE CF4/tonne product	TONNE SF6/tonne product
2A1	<i>CEMENT PRODUCTION (PER TONNE OF CLINKER)</i>						
	CEMENT	0.52					
2A2	<i>LIME PRODUCTION (PER TONNE OF LIME)</i>						
	QUICKLIME/HIGH CALCIUM LIME	0.75					
	DOLOMITIC LIME	0.77					
	HYDRATED LIME	0.59					
2A3	<i>GLASS PRODUCTION (PER TONNE GLASS)</i>						
	GLASS PRODUCTION	0.2					
2A4	<i>Other Process Uses of Carbonates</i>						
2A4a	<i>CERAMICS (PER TONNE CARBONATE)</i>						
	CALCITE/ARAGONITE (CaCO3)	0.43971					
	MAGNESITE (MgCO3)	0.52197					
	DOLOMITE (CaMg(CO3)2)	0.47732					

	SIDERITE (FeCO ₃)	0.37987					
	ANKERITE (Ca(Fe,Mg,Mn)(CO ₃) ₂)	0.40822 to 0.47572					
	RHODOCHROSITE (MnCO ₃)	0.38286					
	SODIUM CARBONATE/SODA ASH (Na ₂ CO ₃)	0.41492					
2A4b	OTHER USES OF SODA ASH (PER TONNE CARBONATE)						
	CALCITE/ARAGONITE (CaCO ₃)	0.43971					
	MAGNESITE (MgCO ₃)	0.52197					
	DOLOMITE (CaMg(CO ₃) ₂)	0.47732					
	SIDERITE (FeCO ₃)	0.37987					
	ANKERITE (Ca(Fe,Mg,Mn)(CO ₃) ₂)	0.40822 to 0.47572					
	RHODOCHROSITE (MnCO ₃)	0.38286					
	SODIUM CARBONATE/SODA ASH (Na ₂ CO ₃)	0.41492					
2A4c	NON METALLURGICAL MAGNESIA PRODUCTION (PER TONNE CARBONATE)						
	CALCITE/ARAGONITE (CaCO ₃)	0.43971					
	MAGNESITE (MgCO ₃)	0.52197					
	DOLOMITE (CaMg(CO ₃) ₂)	0.47732					
	SIDERITE (FeCO ₃)	0.37987					
	ANKERITE (Ca(Fe,Mg,Mn)(CO ₃) ₂)	0.40822 to 0.47572					

IPCC Code	SOURCE CATEGORY ACTIVITY/ RAW MATERIAL/ PRODUCT	TONNE CO ₂ / tonne product	TONNE CH ₄ / tonne product	TONNE N ₂ O/ tonne product	TONNE C ₂ F ₆ / tonne product	TONNE CF ₄ / tonne product	TONNE SF ₆ / tonne product
	RHODOCHROSITE (MnCO ₃)	0.38286					
	SODIUM CARBONATE/SODA ASH (Na ₂ CO ₃)	0.41492					
2A5	OTHER (PER TONNE CARBONATE)						
	CALCITE/ARAGONITE (CaCO ₃)	0.43971					
	MAGNESITE (MgCO ₃)	0.52197					
	DOLOMITE (CaMg(CO ₃) ₂)	0.47732					
	SIDERITE (FeCO ₃)	0.37987					
	ANKERITE (Ca(Fe,Mg,Mn)(CO ₃) ₂)	0.40822 to 0.47572					
	RHODOCHROSITE (MnCO ₃)	0.38286					
	SODIUM CARBONATE/SODA ASH (Na ₂ CO ₃)	0.41492					
2B1	AMMONIA PRODUCTION (PER TONNE NH₃)						
	MODERN PLANTS - CONVENTIONAL REFORMING (NATURAL GAS)	1.694					

	EXCESS AIR REFORMING (NATURAL GAS)	1.666					
	AUTOTHERMAL REFORMING (NATURAL GAS)	1.694					
	PARTIAL OXIDATION	2.772					
	AVERAGE VALUE NATURAL GAS (MIXTURE OF MODERN & OLD)	2.104					
	AVERAGE VALUE (PARTIAL OXIDATION)	3.273					
2B2	<i>NITRIC ACID PRODUCTION (PER TONNE NITRIC ACID)</i>						
	PLANTS WITH NSCR (ALL PROCESSES)		0.002				
	PLANTS WITH PROCESS (INTEGRATED OR TAIL GAS NO ₂ DESTRUCTION)		0.0025				
	ATMOSPHERIC PRESSURE PLANTS (LOW PRESSURE PLANTS)		0.005				
	MEDIUM PRESSURE COMBUSTION PLANTS (MEDIUM PRESSURE)		0.007				
	HIGH PRESSURE PLANTS (HIGH PRESSURE)		0.009				
2B3	<i>ADIPIC ACID PRODUCTION (PER TONNE ADIPIC ACID UNCONTROLLED)</i>						
	NITRIC ACID OXIDATION (ADIPIC ACID)		0.3				
2B4	<i>CAPROLACTAM, GLYOXAL AND GLYOXYLIC ACID PRODUCTION (PER TONNE PRODUCED)</i>						
	CAPROLACTAM PRODUCTION (RASCHIG)		0.009				

IPCC Code	SOURCE CATEGORY ACTIVITY/RAW MATERIAL/ PRODUCT	TONNE CO ₂ /tonne product	TONNE CH ₄ /tonne product	TONNE N ₂ O/tonne product	TONNE C ₂ F ₆ /tonne product	TONNE CF ₄ /tonne product	TONNE SF ₆ /tonne product
	GLYOXAL PRODUCTION		0.1				
	GLYOXYLIC ACID PRODUCTION		0.02				
2B5	<i>CARBIDE PRODUCTION (PER TONNE RAW MATERIAL USED)</i>						
	SILICON CARBIDE PRODUCTION	2.3	0.0102				
	PETROLEUM COKE USE	1.7					
2B5	<i>CARBIDE PRODUCTION (PER TONNE CARBIDE PRODUCED)</i>						
	SILICON CARBIDE PRODUCTION (CARBIDE PRODUCED)	2.62	0.0116				
	PETROLEUM COKE USE	1.09					
	USE OF PRODUCT	1.1					
2B6	<i>TITANIUM DIOXIDE PRODUCTION (PER TONNE PRODUCT)</i>						
	TITANIUM SLAG	NOT AVAILABLE					

	SYNTHETIC RUTILE	1.43					
	RUTILE TITANIUM DIOXIDE (CHLORIDE ROUTE)	1.34					
2B7	SODA ASH PRODUCTION (PER TONNE OF SODA ASH OR TRONA)						
	NATURAL SODA ASH OUTPUT	0.138					
	NATURAL SODA ASH (TRONA USED)	0.097					
2B8	PETROCHEMICAL AND CARBON BLACK PRODUCTION						
2B8a	METHANOL PRODUCTION (PER TONNE METHANOL PRODUCED)						
	CONVENTIONAL STEAM REFORMING WITHOUT PRIMARY REFORMER (NATURAL GAS FEEDSTOCK)	0.67	0.0023				
	CONVENTIONAL STEAM REFORMING WITH PRIMARY REFORMER (NATURAL GAS FEEDSTOCK)	0.497	0.0023				
	CONVENTIONAL STEAM REFORMING LURGI CONVENTIONAL PROCESS (NATURAL GAS FEEDSTOCK)	0.385	0.0023				
	CONVENTIONAL STEAM REFORMING LURGI CONVENTIONAL PROCESS (NATURAL GAS+CO2 FEEDSTOCK)	0.267	0.0023				

IPCC Code	SOURCE CATEGORY ACTIVITY/ RAW MATERIAL/ PRODUCT	TONNE CO2/ tonne product	TONNE CH4/ tonne product	TONNE N2O/ tonne product	TONNE C2F6/ tonne product	TONNE CF4/ tonne product	TONNE SF6/ tonne product
	CONVENTIONAL STEAM REFORMING LURGI LOW PRESSURE PROCESS (NATURAL GAS FEEDSTOCK)	0.267	0.0023				
	CONVENTIONAL STEAM REFORMING LURGI COMBINED PROCESS (NATURAL GAS FEEDSTOCK)	0.396	0.0023				
	CONVENTIONAL STEAM REFORMING LURGI MEGA METHANOL PROCESS (NATURAL GAS FEEDSTOCK)	0.31	0.0023				
	PARTIAL OXIDATION PROCESS (OIL FEEDSTOCK)	1.376	0.0023				
	PARTIAL OXIDATION PROCESS (COAL FEEDSTOCK)	5.285	0.0023				
	PARTIAL OXIDATION PROCESS (LIGNITE FEEDSTOCK)	5.02	0.0023				
	CONVENTIONAL STEAM REFORMING WITH INTEGRATED AMMONIA PRODUCTION (NATURAL GAS FEEDSTOCK)	1.02	0.0023				
2B8b	STEAM CRACKING ETHYLENE PRODUCTION (PER TONNE ETHYLENE PRODUCED)						
	ETHYLENE (TOTAL PROCESS & ENERGY FEEDSTOCK USE) - NAPTHA	1.73	0.003				

	ETHYLENE (TOTAL PROCESS & ENERGY FEEDSTOCK USE) - GAS OIL	2.29	0.003				
	ETHYLENE (TOTAL PROCESS & ENERGY FEEDSTOCK USE) - ETHANE	0.95	0.006				
	ETHYLENE (TOTAL PROCESS & ENERGY FEEDSTOCK USE) - PROPANE	1.04	0.003				
	ETHYLENE (TOTAL PROCESS & ENERGY FEEDSTOCK USE) - BUTANE	1.07	0.003				
	ETHYLENE (TOTAL PROCESS & ENERGY FEEDSTOCK USE) - OTHER	1.73	0.003				
	ETHYLENE (PROCESS FEEDSTOCK USE) - NAPHTHA	1.73	0.003				
	ETHYLENE (PROCESS FEEDSTOCK USE) - GAS OIL	2.17	0.003				
	ETHYLENE (PROCESS FEEDSTOCK USE) - ETHANE	0.76	0.006				
	ETHYLENE (PROCESS FEEDSTOCK USE) - PROPANE	1.04	0.003				
	ETHYLENE (PROCESS FEEDSTOCK USE) - BUTANE	1.07	0.003				
	ETHYLENE (PROCESS FEEDSTOCK USE) - OTHER	1.73	0.003				

IPCC Code	SOURCE CATEGORY ACTIVITY/ RAW MATERIAL/ PRODUCT	TONNE CO2/ tonne product	TONNE CH4/ tonne product	TONNE N2O/ tonne product	TONNE C2F6/ tonne product	TONNE CF4/ tonne product	TONNE SF6/ tonne product
	ETHYLENE (SUPPLEMENTAL FUEL - ENERGY FEEDSTOCK) USE - GAS OIL	0.12	0.003				
	ETHYLENE (SUPPLEMENTAL FUEL - ENERGY FEEDSTOCK) USE - ETHANE	0.19	0.006				
2B8c	ETHYLENE DICHLORIDE AND VINYL CHLORIDE MONOMER (PER TONNE EDC PRODUCED OR TONNE VCM PRODUCT PRODUCED)						
	DIRECT CHORINATION PROCESS (EDC)	0.191	0.0000226				
	OXYCHLORINATION PROCESS (EDC)	0.202	0.0000226				
	BALANCED PROCESS (DEFAULT) - EDC	0.196	0.0000226				
2B8c	ETHYLENE DICHLORIDE AND VINYL CHLORIDE MONOMER (PER TONNE VCM PRODUCED OR TONNE VCM PRODUCT PRODUCED)						
	DIRECT CHLORINATION - PROCESS (VCM)	0.286	0.0000226				
	OXYCHLORINATION PROCESS (VCM)	0.302	0.0000226				
	BALANCED PROCESS (DEFAULT) - VCM	0.294	0.0000226				
2B8d	ETHYLENE OXIDE (PER TONNE ETHYLENE OXIDE PRODUCED)						
	AIR PROCESS (DEFAULT) - CATALYST DEFAULT (70)	0.863	0.00179				

	AIR PROCESS (DEFAULT) - CATALYST (75)	0.663	0.00179				
	AIR PROCESS (DEFAULT) - CATALYST (80)	0.5	0.00179				
	OXYGEN PROCESS (DEFAULT) - CATALYST DEFAULT (75)	0.663	0.00179				
	OXYGEN PROCESS - CATALYST (80)	0.5	0.00179				
	OXYGEN PROCESS - CATALYST (85)	0.35	0.00179				
	ALL ETHYLENE OXIDE PROCESSES - THERMAL TREATMENT	N/A	0.00079				
2B8e	ACRYLONITRILE (PER TONNE ACRYLONITRILE PRODUCED)						
	DIRECT AMMOXIDATION WITH SECONDARY PRODUCTS BURNED FOR ENERGY RECOVERY OR FLARED (DEFAULT)	1	0.00018				
	DIRECT AMMOXIDATION WITH ACETONITRILE BURNED FOR ENERGY RECOVERY OR FLARED	0.83	0.00018				

IPCC Code	SOURCE CATEGORY ACTIVITY/ RAW MATERIAL/ PRODUCT	TONNE CO2/ tonne product	TONNE CH4/ tonne product	TONNE N2O/ tonne product	TONNE C2F6/ tonne product	TONNE CF4/ tonne product	TONNE SF6/ tonne product
	DIRECT AMMOXIDATION WITH ACETONITRILE & HYDROGEN CYANIDE RECOVERED AS PRODUCT	0.79	0.00018				
2B8f	CARBON BLACK PRODUCTION (PER TONNE CARBON BLACK PRODUCED)						
	FURNACE BLACK PROCESS (DEFAULT) - Primary Feedstock	1.96	0.00006				
	THERMAL BLACK PROCESS PRIMARY FEEDSTOCK	4.59	0.00006				
	ACETYLENE BLACK PROCESS - PRIMARY FEEDSTOCK	0.12	0.00006				
	FURNACE BLACK PROCESS (DEFAULT) - SECONDARY FEEDSTOCK	0.66	0.00006				
	THERMAL BLACK PROCESS SECONDARY FEEDSTOCK	0.66	0.00006				
	ACETYLENE BLACK PROCESS - SECONDARY FEEDSTOCK	0.66	0.00006				
	FURNACE BLACK PROCESS (DEFAULT) - TOTAL FEEDSTOCK	2.62	0.00006				
	THERMAL BLACK PROCESS TOTAL FEEDSTOCK	5.25	0.00 006				
	ACETYLENE BLACK PROCESS - TOTAL FEEDSTOCK	0.78	0.00006				

	ALL CARBON BLACK PROCESSES (NO THERMAL TREATMENT)	N/A	0.0287				
2C1	IRON AND STEEL PRODUCTION (PER TONNE PRODUCT PRODUCED)						
	SINTER PRODUCTION	0.2	0.00007				
	COKE OVEN	0.56	0.0000001				
	PIG IRON PRODUCTION	1.35					
	DIRECT REDUCED IRON (DRI) PRODUCTION	0.7	0.001/TJ (NG)				
	PELLET PRODUCTION	0.03					
	BASIC OXYGEN FURNACE	1.46					
	ELECTRIC ARC FURNACE	0.08					
	OPEN HEARTH FURNACE	1.72					
	GLOBAL AVERAGE	1.06					
2C2	FERROALLOYS PRODUCTION (PER TONNE PRODUCTION)						
	FERROSILICON (45%) SI	2.5					
	FERROSILICON (65%) SI	3.6	0.001				
	FERROSILICON (75%) SI	4	0.001				
	FERROSILICON (90%) SI	4.8	0.0011				
	FERROMANGANESE (7% C)	1.3					

IPCC Code	SOURCE CATEGORY ACTIVITY/ RAW MATERIAL/ PRODUCT	TONNE CO2/ tonne product	TONNE CH4/ tonne product	TONNE N2O/ tonne product	TONNE C2F6/ tonne product	TONNE CF4/ tonne product	TONNE SF6/ tonne product
	FERROMANGANESE (1% C)	1.5					
	SILICOMANGANESE	1.4					
	SILICON METAL	5	0.0012				
	FERROCHROMIUM (STAND ALONE)	1.3					
	FERROCHROMIUM (WITH SINTER PLANT)	1.6					
2C3	ALUMINIUM PRODUCTION (PER TONNE ALUMINIUM PRODUCED)						
	PREBAKE	1.6					
	SODERBERG	1.7					
	CWPB			0.00004	0.0004		
	SWPB			0.0004	0.0016		
	VSS			0.00004	0.0008		
	HSS			0.00003	0.0004		
2C4	MAGNESIUM PRODUCTION (PER TONNE MAGNESIUM PRODUCED)						
	DOLOMITE	5.13				0.001	

	MAGNESITE	2.83					0.001
2C5	LEAD PRODUCTION (PER TONNE PRODUCT)						
	IMPERIAL SMOLE FURNACE (ISF) PRODUCTION	0.59					
	DIRECT SMELTING PRODUCTION	0.25					
	TREATMENT OF SECONDARY RAW MATERIALS	0.2					
	DEFAULT EF	0.52					
2C6	ZINC PRODUCTION (PER TONNE PRODUCT)						
	WAELZ KILN	3.66					
	PYROMETALLURGICAL	0.43					
	DEFAULT EF	1.72					

Schedule 2

[Schedule 2 substituted by [s. 99 of Act 34 of 2019](#) (wef 15 January 2020) and amended by [s. 65 \(1\) of Act 20 of 2021](#) (wef 1 January 2021).]

IPCC Code	Activity/ Sector	Threshold	Basic tax-free allowance %	Process emissions allowance %	Fugitive emissions allowance %	Trade exposure allowance %	Performance allowance %	Carbon budget allowance %	Offsets allowance %	Maximum total allowances %
1	ENERGY									
1A	Fuel Combustion Activities									
1A1	Energy Industries (including heat and electricity recovery from Waste)									
1A1a	Main Activity Electricity and Heat Production (including Combined Heat and Power Plants)	10 MW(th)	60	0	0	10	5	5	10	90
1A1b	Petroleum Refining	10 MW(th)	60	0	0	10	5	5	10	90
1A1c	Manufacture of Solid Fuels and Other Energy Industries	10 MW(th)	60	0	0	10	5	5	10	90
1A2	Manufacturing Industries and Construction (including heat and electricity recovery from Waste)		60	0	0	10	5	5	10	90
1A2a	Iron and Steel	10 MW(th)	60	0	0	10	5	5	10	90
1A2b	Non-Ferrous Metals	10 MW(th)	60	0	0	10	5	5	10	90
1A2c	Chemicals	10 MW(th)	60	0	0	10	5	5	10	90
1A2d	Pulp, Paper and Print	10 MW(th)	60	0	0	10	5	5	10	90

1A2e	Food Processing, Beverages and Tobacco	10 MW(th)	60	0	0	10	5	5	10	90
1A2f	Non-Metallic Minerals	10 MW(th)	60	0	0	10	5	5	10	90
1A2g	Transport Equipment	10 MW(th)	60	0	0	10	5	5	10	90
1A2h	Machinery	10 MW(th)	60	0	0	10	5	5	10	90
1A2i	Mining and Quarrying	10 MW(th)	60	0	0	10	5	5	10	90
1A2j	Wood and Wood Products	10 MW(th)	60	0	0	10	5	5	10	90
1A2k	Construction	10 MW(th)	60	0	0	10	5	5	10	90
1A2l	Textile and Leather	10 MW(th)	60	0	0	10	5	5	10	90
1A2m	Brick manufacturing: 1 million bricks a month	1 million	60	0	0	10	5	5	10	90

[Item 1A2m threshold substituted by s. 65 (1) (a) of [Act 20 of 2021](#) (wef 1 January 2021).]

1A2n	Manufacture of ceramic products by firing in particular roofing tiles, tiles, stoneware or porcelain	5 tonnes of production per day	60	0	0	10	5	5	10	90
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[Item 1A2n inserted by s. 65 (1) (b) of [Act 20 of 2021](#) (wef 1 January 2021).]

1A3	Transport									
1A3a	Domestic Aviation	100 000 litres/year	75	0	0	0	5	5	10	95
1A3b	Road Transportation	N/A	75	0	0	0	0	5	10	90
1A3c	Railways	100 000 litres/year	75	0	0	0	0	5	10	90

IPCC Code	Activity/ Sector	Threshold	Basic tax-free allowance %	Process emissions allowance %	Fugitive emissions allowance %	Trade exposure allowance %	Performance allowance %	Carbon budget allowance %	Offsets allowance %	Maximum total allowances %
1A3d	Water-borne Navigation	100 000 litres/year	75	0	0	0	0	5	10	90
1A3e	Other Transportation	N/A	75	0	0	0	0	5	10	90
1A4	Other Sectors (including heat and electricity recovery from Waste)									
1A4a	Commercial/ Institutional	10 MW(th)	60	0	0	10	5	5	10	90
1A4b	Residential	10 MW(th)	100	0	0	0	0	0	0	100
1A4c	Agriculture/ Forestry/Fishing/ Fish Farms	10 MW(th)	60	0	0	10	5	5	10	90

1A5	Non-Specified (including heat and electricity recovery from Waste)									
1A5a	Stationary	10 MW(th)	60	0	0	10	5	5	10	90
1A5b	Mobile	N/A	60	0	0	10	5	5	10	90
1A5c	Multilateral Operations	N/A	60	0	0	10	5	5	10	90
1B	Fugitive Emissions from Fuels									
1B1	Solid Fuels									
1B1a	Coal Mining and Handling	none	60	0	10	10	5	5	5	95
1B1ai	Underground mines including flaring of drained methane (excluding abandoned mines)	none	60	0	10	10	5	5	5	95
1B1aii	Surface mines	none	60	0	10	10	5	5	5	95
1B1b	Uncontrolled Combustion, and Burning Coal Dumps	N/A	100	0	0	0	0	0	0	100
1B1c	Solid Fuel Transformation									
1B1c1	Coke production processes	none	60	0	10	10	5	5	5	95
1B1c2	Charcoal production processes	none	60	0	10	10	5	5	5	95
1B1c3	Any other solid fuel transformation involving fossil and organic carbon based fuels (eg biofuel productions)	none	60	0	10	10	5	5	5	95
1B2	Oil and Natural Gas									
1B2a	Oil	none	60	0	10	10	5	5	5	95
1B2ai	Venting	none	60	0	10	10	5	5	5	95
1B2aii	Flaring	none	60	0	10	10	5	5	5	95
1B2aiii	All other	none	60	0	10	10	5	5	5	95
1B2b	Natural Gas	none	60	0	10	10	5	5	5	95
1B2bi	Venting	none	60	0	10	10	5	5	5	95
1B2bii	Flaring	none	60	0	10	10	5	5	5	95

IPCC Code	Activity / Sector	Threshold	Basic tax-free allowance %	Process emissions allowance %	Fugitive emissions allowance %	Trade exposure allowance %	Performance allowance %	Carbon budget allowance %	Offsets allowance %	Maximum total allowances %
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1B2biii	All other	none	60	0	10	10	5	5	5	95
1B3	Other Emissions from Energy Production									
1B3a	Coal-to-liquids processes	none	60	0	10	10	5	5	5	95
1B3b	Gas-to-liquids processes	none	60	0	10	10	5	5	5	95
1B3c	Gas-to-chemicals processes	none	60	0	10	10	5	5	5	95
1C	Carbon Dioxide Transport and Storage									
1C1	Transport of CO2	none	60	0	10	10	5	5	5	95
1C1a	Pipelines	10 000 tons CO2/year	60	0	10	10	5	5	5	95
1C1b	Ships	10 000 tons CO2/year	60	0	10	10	5	5	5	95
1C1c	Other (please specify)	10 000 tons CO2/year	60	0	10	10	5	5	5	95
1C2	Injection and Storage									
1C2a	Injection	10 000 tons CO2/year	60	0	10	10	5	5	5	95
1C2b	Storage	10 000 tons CO2/year	60	0	10	10	5	5	5	95
1C3	Other	N/A	60	0	10	10	5	5	5	95
2	INDUSTRIAL PROCESSES AND PRODUCT USE									
2A	Mineral Industry									
2A1	Cement Production	none	60	10	0	10	5	5	5	95
2A2	Lime Production	none	60	10	0	10	5	5	5	95
2A3	Glass Production	none	60	10	0	10	5	5	5	95
2A4	Other Process Uses of Carbonates		60	10	0	10	5	5	5	95
2A4a	Ceramics	50 tonnes of production a month	60	10	0	10	5	5	5	95
[Item 2A4a threshold substituted by s. 65 (1) (c) of Act 20 of 2021 (wef 1 January 2021).]										
2A4b	Other Uses of Soda Ash	50 tonnes of production a month	60	10	0	10	5	5	5	95

[Item 2A4b threshold substituted by s. 65 (1) (d) of [Act 20 of 2021](#) (wef 1 January 2021).]

2A4c	Non Metallurgical Magnesia Production	none	60	10	0	10	5	5	5	95
2A4d	Other (please specify)	20 tonnes of production a month	60	10	0	10	5	5	5	95

[Item 2A4d threshold substituted by s. 65 (1) (e) of [Act 20 of 2021](#) (wef 1 January 2021).]

2A5	Other (please specify)	N/A	60	0	0	10	5	5	10	90
2B	Chemical Industry									
2B1	Ammonia Production	none	60	10	0	10	5	5	5	95
2B2	Nitric Acid Production	none	60	10	0	10	5	5	5	95
2B3	Adipic Acid Production	none	60	10	0	10	5	5	5	95
2B4	Caprolactam, Glyoxal and Glyoxylic Acid Production	none	60	10	0	10	5	5	5	95

IPCC Code	Activity / Sector	Threshold	Basic tax-free allowance %	Process emissions allowance %	Fugitive emissions allowance %	Trade exposure allowance %	Performance allowance %	Carbon budget allowance %	Offsets allowance %	Maximum total allowances %
2B5	Carbide Production	none	60	10	0	10	5	5	5	95
2B6	Titanium Dioxide Production	none	60	10	0	10	5	5	5	95
2B7	Soda Ash Production	none	60	10	0	10	5	5	5	95
2B8	Petrochemical and Carbon Black Production									
2B8a	Methanol	none	60	10	0	10	5	5	5	95
2B8b	Ethylene	none	60	10	0	10	5	5	5	95
2B8c	Ethylene Dichloride and Vinyl Chloride Monomer	none	60	10	0	10	5	5	5	95
2B8d	Ethylene Oxide	none	60	10	0	10	5	5	5	95
2B8e	Acrylonitrile	none	60	10	0	10	5	5	5	95
2B8f	Carbon Black	none	60	10	0	10	5	5	5	95
2B8g	Hydrogen Production	none	60	10	0	10	5	5	5	95
2B9	Fluorochemical Production									
2B9a	By-product Emissions	none	60	10	0	10	5	5	5	95
2B9b	Fugitive Emissions	none	60	10	0	10	5	5	5	95
2B10	Other (Please specify)	20 tonnes of production a month	60	10	0	10	5	5	5	95

[Item 2B10 threshold substituted by s. 65 (1) (f) of [Act 20 of 2021](#) (wef 1 January 2021).]

2C	Metal Industry									
2C1	Iron and Steel Production	none	60	10	0	10	5	5	5	95
2C2	Ferroalloys Production	none	60	10	0	10	5	5	5	95
2C3	Aluminium Production	none	60	10	0	10	5	5	5	95

2C4	Magnesium Production	none	60	10	0	10	5	5	5	5	95
2C5	Lead Production	none	60	10	0	10	5	5	5	5	95
2C6	Zinc Production	none	60	10	0	10	5	5	5	5	95
2C7	Other (please specify)	50 tonnes of production a month	60	0	0	10	5	5	10	90	

[Item 2C7 threshold substituted by s. 65 (1) (g) of [Act 20 of 2021](#) (wef 1 January 2021).]

2D	Non-Energy Products from Fuels and Solvent Use										
2D1	Lubricant Use	N/A	60	0	0	10	5	5	10	90	
2D2	Paraffin Wax Use	N/A	60	0	0	10	5	5	10	90	
2D3	Solvent Use	N/A	60	0	0	10	5	5	10	90	
2D4	Other (please specify)	N/A	60	0	0	10	5	5	10	90	
2E	Electronics Industry										
2E.1	Integrated Circuit or Semiconductor	N/A	60	0	0	10	5	5	10	90	
2E.2	TFT Flat Panel Display	N/A	60	0	0	10	5	5	10	90	
2E.3	Photovoltaics	N/A	60	0	0	10	5	5	10	90	
2E.4	Heat Transfer Fluid	N/A	60	0	0	10	5	5	10	90	

IPCC Code	Activity / Sector	Threshold	Basic tax-free allowance %	Process emissions allowance %	Fugitive emissions allowance %	Trade exposure allowance %	Performance allowance %	Carbon budget allowance %	Offsets allowance %	Maximum total allowances %
2E.5	Other (please specify)	N/A	60	0	0	10	5	5	10	90
2F	Product Uses as Substitutes for Ozone Depleting Substances									
2F1	Refrigeration and Air Conditioning									
2F1a	Refrigeration and Stationary Air Conditioning	N/A	60	0	0	10	5	5	10	90
2F1b	Mobile Air Conditioning	N/A	60	0	0	10	5	5	10	90
2F2	Foam Blowing Agents	N/A	60	0	0	10	5	5	10	90
2F3	Fire Protection	N/A	60	0	0	10	5	5	10	90
2F4	Aerosols	N/A	60	0	0	10	5	5	10	90
2F5	Solvents	N/A	60	0	0	10	5	5	10	90
2F6	Other Applications (please specify)	N/A	60	0	0	10	5	5	10	90
2G	Other Product Manufacture and Use									
2G1	Electrical Equipment									

2G1a	Manufacture of Electrical Equipment	N/A	60	0	0	10	5	5	10	90
2G1b	Use of Electrical Equipment	50 kilograms of production per year	60	0	0	10	5	5	10	90
[Item 2G1b threshold substituted by s. 65 (1) (h) of Act 20 of 2021 (wef 1 January 2021).]										
2G1c	Disposal of Electrical Equipment		60	0	0	10	5	5	10	90
2G2	SF6 and PFCs from Other Product Uses	N/A								
2G2a	Military Applications	N/A	60	0	0	10	5	5	10	90
2G2b	Accelerators	N/A	60	0	0	10	5	5	10	90
2G2c	Other (please specify)	N/A	60	0	0	10	5	5	10	90
2G3	N2O from Product Uses	N/A								
2G3a	Medical Applications	N/A	60	0	0	10	5	5	10	90
2G3b	Propellant for Pressure and Aerosol Products	N/A	60	0	0	10	5	5	10	90
2G3c	Other (Please specify)	N/A	60	0	0	10	5	5	10	90
2G4	Other (Please specify)	N/A	60	0	0	10	5	5	10	90
2H	Other									
2H1	Pulp and Paper Industry	N/A	60	0	0	10	5	5	10	90
2H2	Food and Beverages Industry	N/A	60	0	0	10	5	5	10	90
2H3	Other (please specify)	N/A	60	0	0	10	5	5	10	90

IPCC Code	Activity/ Sector	Threshold	Basic tax-free allowance %	Process emissions allowance %	Fugitive emissions allowance %	Trade exposure allowance %	Performance allowance %	Carbon budget allowance %	Offsets allowance %	Maximum total allowances %
3	AGRICULTURE, FORESTRY, AND OTHER LAND USE									
3A	Livestock									
3A1	Enteric Fermentation									
3A1a	Cattle	N/A	100	0	0	0	0	0	0	100
3A1b	Buffalo	N/A	100	0	0	0	0	0	0	100
3A1c	Sheep	N/A	100	0	0	0	0	0	0	100
3A1d	Goats	N/A	100	0	0	0	0	0	0	100
3A1e	Camels	N/A	100	0	0	0	0	0	0	100
3A1f	Horses	N/A	100	0	0	0	0	0	0	100

3A1g	Mules and Asses	N/A	100	0	0	0	0	0	0	100
3A1h	Swine	N/A	100	0	0	0	0	0	0	100
3A1j	Other (please specify)	N/A	100	0	0	0	0	0	0	100
3A2	Manure Management									
3A2a	Cattle	N/A	100	0	0	0	0	0	0	100
3A2b	Buffalo	N/A	100	0	0	0	0	0	0	100
3A2c	Sheep	N/A	100	0	0	0	0	0	0	100
3A2d	Goats	N/A	100	0	0	0	0	0	0	100
3A2e	Camels	N/A	100	0	0	0	0	0	0	100
3A2f	Horses	N/A	100	0	0	0	0	0	0	100
3A2g	Mules and Asses	N/A	100	0	0	0	0	0	0	100
3A2h	Swine	N/A	100	0	0	0	0	0	0	100
3A2i	Poultry	40 000 places for poultry	100	0	0	0	0	0	0	100

[Item 3A2i threshold substituted by s. 65 (1) (i) of [Act 20 of 2021](#) (wef 1 January 2021).]

3A2j	Other (please specify)	N/A	100	0	0	0	0	0	0	100
3B	Land									
3B1	Forest Land									
3B1a	Forest land Remaining Forest Land	100 Hectares of Plantations or Natural forests	100	0	0	0	0	0	0	100
3B1b	Land Converted to Forest Land	100 Hectares of Plantations or Natural forests	100	0	0	0	0	0	0	100
3B2	Cropland									
3B2a	Cropland Remaining Cropland	N/A	100	0	0	0	0	0	0	100
3B2b	Land Converted to Cropland	N/A	100	0	0	0	0	0	0	100
3B3	Grassland									
3B3a	Grassland Remaining Grassland	N/A	100	0	0	0	0	0	0	100
3B3b	Land Converted to Grassland	N/A	100	0	0	0	0	0	0	100
3B4	Wetlands									
3B4a	Wetlands Remaining Wetlands	N/A	100	0	0	0	0	0	0	100
3B4b	Land Converted to Wetlands	N/A	100	0	0	0	0	0	0	100

IPCC Code	Activity/ Sector	Threshold	Basic tax-free allowance %	Process emissions allowance %	Fugitive emissions allowance %	Trade exposure allowance %	Performance allowance %	Carbon budget allowance %	Offsets allowance %	Maximum total allowances %
3B5	Settlements									

3B5a	Settlements Remaining Settlements	N/A	100	0	0	0	0	0	0	100
3B5b	Land Converted to Settlements	N/A	100	0	0	0	0	0	0	100
3B6	Other Land									
3B6a	Other Land Remaining Other Land	N/A	100	0	0	0	0	0	0	100
3B6b	Land Converted to Other Land	N/A	100	0	0	0	0	0	0	100
3C	Aggregate Sources and Non-CO₂ Emissions Sources on Land									
3C1	Emissions from Biomass Burning									
3C1a	Biomass Burning in Forest Lands	100 Hectares of plantations	100	0	0	0	0	0	0	100
[Item 3C1a threshold substituted by s. 65 (1) (j) of Act 20 of 2021 (wef 1 January 2021).]										
3C1b	Biomass Burning in Croplands	N/A	100	0	0	0	0	0	0	100
3C1c	Biomass Burning in Grasslands	N/A	100	0	0	0	0	0	0	100
3C1d	Biomass Burning in All Other Land	N/A	100	0	0	0	0	0	0	100
3C2	Liming	N/A	100	0	0	0	0	0	0	100
3C3	Urea Application	N/A	100	0	0	0	0	0	0	100
3C4	Direct N ₂ O Emissions from Managed Soils	100 Hectares of plantations	100	0	0	0	0	0	0	100
[Item 3C4 threshold substituted by s. 65 (1) (k) of Act 20 of 2021 (wef 1 January 2021).]										
3C5	Indirect N ₂ O Emissions from Managed Soils	100 Hectares of plantations	100	0	0	0	0	0	0	100
[Item 3C5 threshold substituted by s. 65 (1) (l) of Act 20 of 2021 (wef 1 January 2021).]										
3C6	Indirect N ₂ O Emissions from Manure Management	N/A	100	0	0	0	0	0	0	100
3C7	Rice Cultivations	N/A	100	0	0	0	0	0	0	100
3C8	Other (please specify)	N/A	100	0	0	0	0	0	0	100
3D	Other									

3D1	Harvested Wood Products	Harvested Wood Products produced from timber harvested from forest owners registered for reporting under IPCC code 3B1a and 3B1b	100	0	0	0	0	0	0	100
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[Item 3D1 threshold substituted by s. 65 (1) (m) of [Act 20 of 2021](#) (wef 1 January 2021).]

3D2	Other (please specify)	N/A	100	0	0	0	0	0	0	100
4	WASTE									
4A	Solid Waste Disposal									
4A1	Managed Waste Disposal Sites	Receiving 5 tonnes per day or a total capacity of 25000 tonnes	100	0	0	0	0	0	0	100

IPCC Code	Activity / Sector	Threshold	Basic tax-free allowance %	Process emissions allowance %	Fugitive emissions allowance %	Trade exposure allowance %	Performance allowance %	Carbon budget allowance %	Offsets allowance %	Maximum total allowances %
4A2	Unmanaged Waste Disposal Sites	Receiving 5 tonnes per day or a total capacity of 25000 tonnes	100	0	0	0	0	0	0	100
4A3	Uncategorised Waste Disposal Sites	Receiving 5 tonnes per day or a total capacity of 25000 tonnes	100	0	0	0	0	0	0	100
4B	Biological Treatment of Solid Waste	N/A	100	0	0	0	0	0	0	100
4C	Incineration and Open Burning of Waste									
4C0	Waste — Pyrolysis	100 kg/hour	100	0	0	0	0	0	0	100
4C1	Waste Incineration	1 tonne per hour	60	0	0	10	5	5	10	90
4C2	Open Burning of Waste	N/A	100	0	0	0	0	0	0	100
4D	Wastewater Treatment and Discharge									
4D1	Domestic Wastewater Treatment and Discharge	2 Million litres/day	100	0	0	0	0	0	0	100
4D2	Industrial Wastewater Treatment and Discharge	1000 cubic metres per day	100	0	0	0	0	0	0	100

4E	Other (please specify)	N/A								
5	OTHER									
5A	Indirect N2O Emissions from the Atmospheric Deposition of Nitrogen in NOX and NH3	N/A	60	0	0	10	5	5	10	90
5B	Other (please specify)	None	60	0	0	10	5	5	10	90
[Item 5B threshold substituted by s. 65 (1) (n) of Act 20 of 2021 (wef 1 January 2021).]										

Schedule 3
(Section 20)

1 Amends section 1 (1) of the Customs and Excise [Act 91 of 1964](#) by inserting the definition of 'Carbon Tax Act'.

2 Amends the Customs and Excise [Act 91 of 1964](#) by inserting section 54A.
